# Chapter 8
# Educational and Democratic Potential of Digital Games in e-Government

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## ABSTRACT

*Digital games have, or can be made to have, certain characteristics that make them suitable for education, communication, and the promotion of civic skills in e-Government: hypertextuality, interactivity, reusability, updateability, object-likeness, reprogrammability, personalizability, multimodality, and so forth. From the citizens' point of view, the functions of societal games can be divided into learning support and the enhancement of participation in society. Enlightened participation in the civic society requires both. Learning by games should promote the understanding of complex social issues and their mutual relationships. For learning to act as a springboard to informed action, one would also have to understand the consequences of actions and events. Consequently, learning by playing serious games is best understood as reasoned practical action in a virtual world.*

## INTRODUCTION

The Internet has generally been seen as a potential means of widening democratic participation in civic affairs (see e.g. Grossman, 1995). On the other hand, some writers have voiced scepticism about the Internet's ability to do so, and claim for instance that the Internet is no different from the radio and television which by now have been efficiently subsumed under the control of traditional political actors. It will not take long before the political elite learn how to utilize the new media as well to their own advantage (Ferber et al., 2008). Today, professional politicians are

routinely using blogs, Facebook and twitter, for instance. Admittedly, the emergence of new media and access to it by the man of the street alone does not solve all problems of civic participation and good, democratic governance. However, the new media, especially the web 2.0 technologies, which by definition are more difficult to be controlled from above, provide all sorts of new collaborative and engaging tools, including games, which may be used to promote a more egalitarian society.

The chapter at hand investigates how digital games (i.e. computer games, online games, mobile games) are nowadays and could in the future be utilized in promoting civic skills as well as used as a tool for education and communication in e-Government. Digital games have, or can be made to have, certain characteristics that make them suitable for this sort of educational purposes: hypertextuality, interactivity, reusability, updateability, object-likeness, reprogrammability, personalizability, multimodality, and so forth (Patokorpi et al., 2007). From the citizens' point of view, the functions of societal games can be divided into learning support and the enhancement of participation in society. Learning by games should promote the understanding of complex social issues and their mutual relationships. For learning to act as a springboard to informed action one would also have to understand the consequences of actions and events. Enlightened participation in the civic society requires both of the above-mentioned things. The use of games is not limited only to societal issues, like for instance to explain taxation. They can also be used to illustrate natural or ecological events and developments (e.g. floods). Games have several benefits in the context of e-Government. First, games are easily intelligible to citizens, suited especially to illuminate complex, ill-structured issues. Second, games are a cost-effective way to give information about economic, ecological and social issues. Third, games enable the use of real information in real time. In addition, games free their users from geographical, spatial and temporal

constraints, although games can equally well be made context-aware, exploiting the information emerging in a particular place, time and situation. Therefore games are a suitable tool for interaction between the authorities and the citizens. Games also lower the threshold for citizens to be more active members of the civic society.

The chapter gives a rough conceptual assessment of game technology development and adoption, discusses the general role of forms of reasoning and incentives to action or contemplation in playing, and presents a social and cultural rationale for the use of games by citizens in terms of social capital. Also, some examples of existing game applications for e-Government from around the world are briefly presented. The role of game-like applications will be assessed from the government's (e.g. cost-effectiveness and interactivity) and the user's point of view (e.g. updateability and personalizability). We avoid using the term simulation because it easily leads to begging the question of what takes place in the player or group of players, and between them and the digital world. Instead, we build on a general idea of learning as, in essence, an inferential process, and a conception of practical reasoning derived from C.S. Peirce's logical writings. Thus it will be argued that an analysis of the playing of digital games could benefit from seeing it in terms of learning as reasoned action. A comprehensive empirical showcase of this method applied to the design and playing experience of digital games is beyond the scope of the present chapter.

## BACKGROUND

### Game Industry

The rapid development of the Information and Communication Technology (ICT) and related infrastructure has given rise to digital games and gaming as part of our way of life. Although the global game industry as a business is roughly in

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